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An

Inaugural Essay

on

Hepatitis.

Presented to the

Medical Professors

Of the University of Pennsylvania.

For the degree of

Doctor of Medicine.

By John S. Bear, of Charleston, S.C.

Philadelphia.

1827.

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Hepatitis.

Before entering on the consideration of this disease, I shall notice briefly the structure and situation of the liver, and its more important connections with the rest of the system.

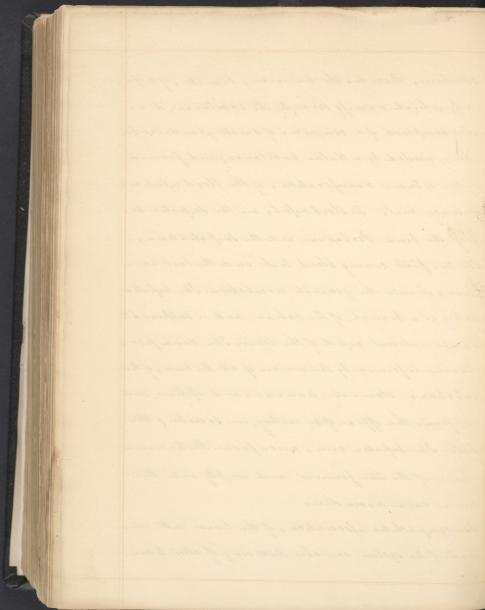
This organ occupies the right hypochondriac, the upper portions of the epigastric, and a small part of the left hypochondriac regions. Its superior convex surface is closely applied to the diaphragm to which it is attached by several processes of peritoneum called its ligaments. It is connected to the stomach below by another extension of peritoneum, the lesser omentum. The same membrane is continued over its surface, forming for it a complete coat. The right extremity of this organ is very thick, extending downwards to the margin of the ribs; while the left tapers to a thin edge, and lies in contact with the stomach. The liver is extremely vascular, and very complex in its struc-

Chapter 11

The first thing I noticed when I stepped out of the car was the cold. It was a sharp contrast to the warm blanket of the car. I looked up at the sky, which was a pale, hazy blue. The air was still, and the silence was broken only by the distant hum of traffic. I took a deep breath, feeling the cool air fill my lungs. The world around me seemed so different from what I had expected. The buildings were tall and modern, their glass facades reflecting the light. The streets were wide and clean, with a few cars parked along the curb. I walked towards the entrance of the building, my steps echoing on the pavement. The door was open, and a bright light welcomed me inside. I felt a sense of anticipation, knowing that this was the beginning of something new. The interior was spacious and well-lit, with a high ceiling and large windows. I walked through a series of corridors, each one leading to a different part of the building. The walls were a neutral color, and the floors were polished and shiny. I saw other people walking in the same direction, some in business suits and others in casual wear. The atmosphere was professional yet relaxed. I reached the end of the corridor and turned right. A sign on the wall indicated the direction to the conference room. I followed the sign, my heart beating a little faster. The door was slightly ajar, and I pushed it open. Inside, a large conference table was set up, and several people were already seated. I took a seat at the end of the table, looking at the others. They were all looking at me, and I felt a bit nervous. The man next to me, a middle-aged man with grey hair, spoke first. He was calm and collected, and his words were clear and concise. I listened intently, nodding my head in agreement. The other people followed suit, and soon we were all engaged in a discussion. The meeting went on for an hour, with everyone contributing their ideas and thoughts. I felt a sense of accomplishment, knowing that I had successfully participated in a professional meeting. The meeting ended with a few more words from the man at the head of the table. I stood up, shaking hands with everyone. It was a pleasant surprise, and I felt a sense of belonging. I walked out of the building, feeling a mix of excitement and nervousness. The world outside was still the same, but I felt like I had entered a new one. I took a deep breath, feeling the cool air fill my lungs. The world around me seemed so different from what I had expected. The buildings were tall and modern, their glass facades reflecting the light. The streets were wide and clean, with a few cars parked along the curb. I walked towards the entrance of the building, my steps echoing on the pavement. The door was open, and a bright light welcomed me inside. I felt a sense of anticipation, knowing that this was the beginning of something new. 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structure. Besides the numerous branches of vessels, which ramify through its substance, it is also composed of a congeries of small glandular bodies, united by cellular substance, and formed by the uterine ramifications of the blood-vessels and biliary ducts. Its blood-vessels are the hepatic artery, the vena portarum, and the hepatic veins. The two first convey blood to it, and the last returns it into the general circulation. The hepatic artery is a branch of the aorta, and is supposed to be the nutrient vessel of the liver. The vena portarum is formed by the union of all the veins of the intestines, stomach, pancreas and spleen, and performs the office of an artery, in secreting the bile. The hepatic vein, arises from the termination, of the two former, and empty into the vena cava inferior.

The sympathetic associations of the liver with other parts of the system, are also deserving of attention.



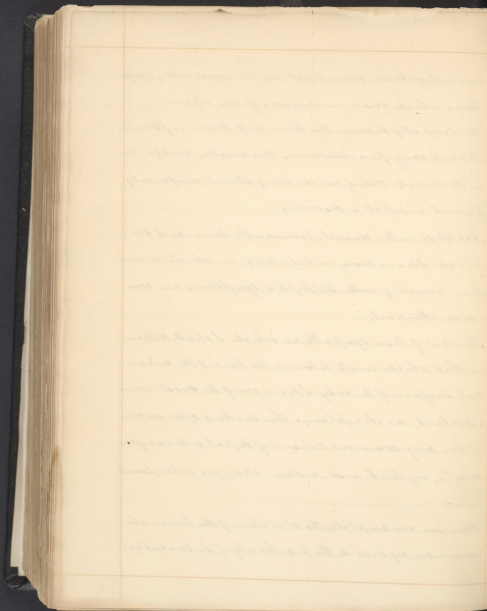
since they throw some light on the anomalous symptoms which arise in diseases of this organ.

The sympathy between the liver and brain is familiar to every practitioner, headache, vertigo, & a disturbed state of mind being almost uniformly present in hepatic disorders.

Not less so, is the consent between the liver and stomach. This is seen in hepatitis, in which inflammation, coinciding with dyspeptic symptoms are common attendants.

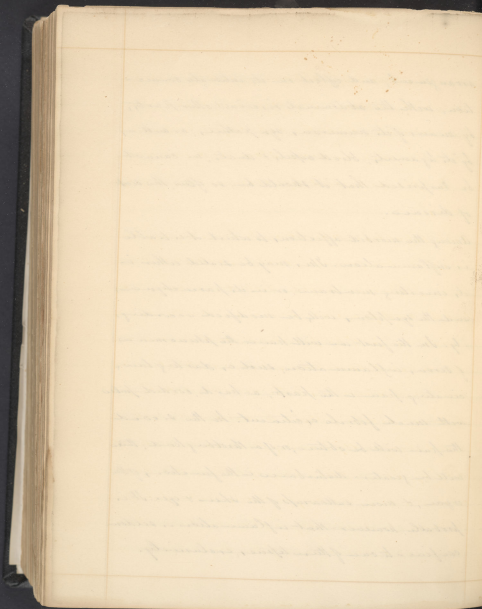
The last of these sympathies which I shall notice, is that which exists between the liver & the external surface of the body. This is one of the most important, as it explains the *modus operandi* of two very common causes of hepatic derangements, viz heat and sudden changes of temperature.

When we contemplate the structure of the liver, its immense size, and the peculiarity of its vascular



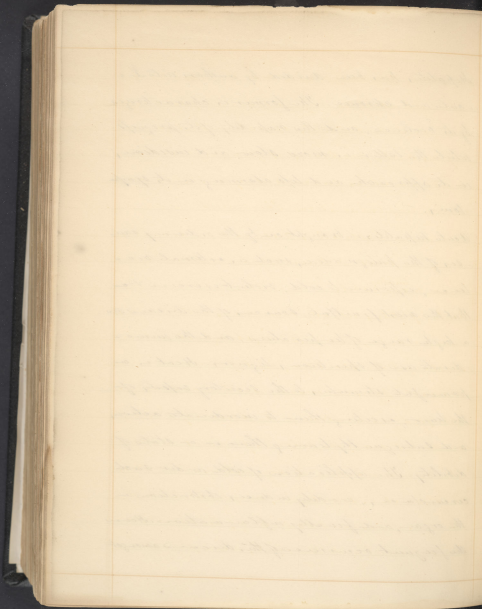
arrangement, and reflect on its intimate connection, with the abdominal viscera & other parts, by means of its numerous sympathies, as well as by its ligaments, blood vessels & ducts, we cannot be surprised that it should be, so often, the seat of disease.

Among the morbid affections, to which it is liable is inflammation. This may be seated either in its investing membranes, or in its parenchyma, and the symptoms, will be modified accordingly. In the first case will happen the phenomena of serous inflammation, such as, darting lancinating pain in the part, a hard, corded feel with much febrile excitement. In the second the pain will be obtuse, or of a throbbing kind; there will be greater disturbance in the function, of the organ, & more sallowness of the skin & eyes. It is probable, however, that inflammation is seldom confined to one of these tissues, exclusively.



Hepatitis has been divided by authors into acute and chronic. The former is characterized by its violence, and the rapidity of its progress while the latter is more slow and insidious, in its approach, and less alarming in its symptoms.

Acute hepatitis is brought on by the ordinary causes of the phlegmatics, such as, external violence, exposure to cold, violent exercise &c. But the most fruitful sources of the disease are a high range of temperature, and the immoderate use of spirituous liquors. Heat is a powerful stimulus to the secretory vessels of the liver, exciting them to inordinate action, and subsequently leaving them in a state of debility. The application of cold under such circumstances, especially in cases, obstructions in the organ, and feebly inflammations. Hence the frequent occurrence of this disease amongst



us, during the autumnal months, when the excessive heat of the day, is followed by cold evenings. Ardent spirits operate in the same way as heat, producing at first high excitement, which is succeeded by a state of corresponding exhaustion. The male sex is said to be more liable to this disease than females; owing, no doubt, to their greater exposure, and their more ^{irregular} habits.

Acute hepatitis, usually commences with rigors, succeeded by pain in the right hypochondrium, shooting to the shoulder, heat of skin and considerable pyrexia ensues, together with cough, oppressed respiration and difficulty of lying on the left side; the pulse is frequent and hard, the tongue white and dry, with extreme thirst; the stomach is sometimes much disturbed, thus in nausea & vomiting; the bowels are constipated, and the stool, when procured,

show a deficiency of bile; the urine is high colored and sparingly secreted; Throughout the case, the spirits are much dejected.

These symptoms vary in different ^{cases} according to the part of the organ affected. When its upper convex surface, or the ligaments which unite it to the diaphragm are inflamed, the cough, pains, and dyspnea are more distressing, and it has, in some cases, been mistaken for pneumonia. When on the contrary its concave portion is the seat of disease, the stomach is most disturbed, giving rise to many of the symptoms of gastritis. By a careful examination however, a sufficiently clear diagnosis may be obtained. From pneumonia it is distinguished, by the pain being lower down in the side, and its being increased by pressure under the false rib. The cough too, comes on much later than in pneumonia; while the evacuation, indicate greater de-

derangement of the biliary secretion, than occurs
in the other phlegmasiae. The position of the pain,
its extending to the shoulder, together with the sub-
sidence of the skin with generally distinguishes
it from gonitis. It may readily be distinguished
from spasms of the biliary ducts, with which
it has sometimes been confounded, by the high
febrile excitement; the frequency of pulse;
the permanency of ^{the} pain; and by the patient
being able to lie in a straight posture.

This disease most frequently ends in resolu-
tion or in suppurations. Its termination in reso-
lution is denoted by a gradual subsidence of
pain and febrile symptoms, with a return
of the appetite & an improvement in the con-
plexion. At other times, this event is accom-
panied by some critical discharge from the
skin, bowels, or kidneys, or by a hæmorrhage
from the nose or hæmorrhoidal vessels.

Suppuration is a more common result of the disease, in hot climates, than with us. Its approach is announced by increase of pain, rigour, frequent full pulses, hot dry skin &c. A heavy dull uneasiness in the part, instead of acute pain; evening fever; hectic flushes, and night sweats, denote the formation of matter.

The abscess when formed is variously discharged. X
If no adhesion, take place with contiguous parts, it bursts into the cavity of the abdomen, bringing on peritoneal inflammation, which quickly terminates, in death. Sometimes, adhesions, are formed with the abdominal parietes, the matter escaping externally. At others, the abscess opens into some portion of the intestinal canal & the pus passes off with the stool. The two last are the most favourable routes, for the matter, and frequent cures are said to have been effected in this way. Occasionally the mat-

matter finds its way through the diaphragm into
the lungs & is brought up by coughing; or else it
is effused into the cavity of the thorax, forming
empyema. The prognosis in this case is very
unfavourable, tho' recoveries have taken place
under these circumstances.

From the history which has been given of this dis-
ease, the indications of cure are obvious; viz
to subdue inflammation, and to rectify the bilious
secretions. Venesection is evidently required,
and must be used with freedom; repeating it
as often as it is demanded by the pain and the
state of the pulse. Topical bleeding is scarcely of less
importance. Cups or leeches are to be applied to
the sides, and may be continued, even when
the lancet is no longer admissible. Having con-
sidered general & local blood-letting to a sufficient
extent, a large blister should next be placed
over the part, and may be either renewed,

or the blistered surface may be dressed with some stimulating ointment. While we are employing these means, purgatives must not be omitted. One of the most usual effects of inflammation, is to derange the functions of the organ in which it occurs. This is the case in hepatitis, purgatives, therefore, and particularly the mercurials, from the property which they possess of emulging the biliary ducts, and improving the hepatic secretions, are invaluable remedies in the disease. Calomel should be given in large doses, and its operation on the bowels quickened by the neutral salts or jalap. In the tropical climate, mercury is generally used to produce ptyalism, in the early stage of this disease. But this practice tho' perhaps proper in those countries, is not admissible here. As auxiliary to the foregoing measures, the antiphlogistic regimen must be strictly enjoined. The patient's food should consist of the least sti-

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train, I felt a sense of relief, as if I had been
released from a long, dark tunnel. The air was
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stimulating article, of diet, & then gruel, or arrow-
root jelly, barley water, toast-water &c. - His drink,
should be of a cooling nature, & lemonade, ap-
ple water &c. - By these means properly directed,
we will generally succeed in subduing the disease.
But should it prove obstinate, we must then re-
-sort to mercury & a sialagogue. It should be
given until it affects the mouth slightly, a pro-
-fuse salivation is both disagreeable and un-
-necessary. For this purpose one or two grains
of calomel, or three or four of the blue pill may
be given at bed-time, If we wish the mercuri-
-al action to be more speedily induced, we may
direct a drachm or two of the mercurial oint-
ment, to be rubbed into the inner part of the
thighs every night & morning. As soon as a
tenderness of the gums is complained of by the pa-
-tient, the medicine should be discontinued
or its quantity reduced. By keeping him in

this state for some time, the biliary secretion will be found to improve, the complexion to display a more healthy aspect, and in short, most of the unpleasant symptoms, will disappear. Inten-
sive hemorrhages, will occasionally occur, in which the disease will resist all our remedies, and terminate in suppuration. When this takes place, the mercury must be laid aside, and the operation should be invited to the surface by the fomentations or poultices, to the part. As soon as the abscess points, it should be opened, and never be suffered to discharge spontaneously. The patient with ^{proper} regains a more generous diet, and generally the cinchona and other tonic medicines, will be necessary.

Chronic hepatitis may be either the result of the acute species, or it may occur as an original affection, independent of any previous active inflammation. This form of the disease usually

creeps on very imperceptibly, and sometimes con-
-tinues its progress for a considerable time, with-
-out giving the patient much inconvenience, or
-else it puts on the guise of dyspepsia or some o-
-ther disease, and thus runs on unchecked.
Cases are even related, in which the liver en-
-disposition, has been found, completely disorga-
-nized, tho' no symptoms during the patient's life-
-time, indicated disease in this part.

In most cases, however, a train of symptoms pre-
-sents themselves, which to the attentive obser-
-ver will point out the true nature of the dis-
-ease. The patient becomes inactive, andaverse
to any exertion of body or mind; he is overcome
with drowsiness and lassitude, particularly af-
-ter meals. The bowels are torpid, and the
-concoctions, when they take place, are un-
-healthy; the urine is turbid depositing a calareti-
-ous sediment; the skin is dry & harsh; the counte-

complexion pale and sallow; the pulse is frequent and often intermits, from the obstruction of the circulation in the liver; dull obdurate pain is felt in the right side, tho' sometimes, it is confined to the left; in other cases there is merely a sense of weight & distension in the part. After a time the stomach sympathizes; the appetite is capricious; the tongue heavily loaded; and flatulences, sour eructations, and other signs of impaired digestion make their appearance. The patient now becomes gloomy and desponding and loses his relish for society. In the progress of the disease the liver becomes increased in volume, and may be felt extending below the margin of the ribs. Not unfrequently the lungs, at this period take on disease, either from the overgrowth of the enlarged liver, or from a metastasis of morbid action. There is then, much difficulty of breathing, with a dry tickling cough,

the case strongly resembling asthma. In other instances, the lungs are more seriously affected; purulent expectoration takes place; hectic fever comes on; the patient wastes away, and dies, with all the symptoms, of true phthisis pulmonalis.

The causes of primary chronic hepatitis are the same as those of the acute species, but acting more slowly & feebly. Of these by far the most general in its operations, is the habitual use of intoxicating liquors. The injurious effects of these article, on the liver is a subject of such common observation, that a tumid abdomen & sallow complexion, are considered as certain characteristics of the inebriate, as his faltering speech and unsteady gait.

When the disease succeeds the acute species, it is in most cases, to be ascribed to the neglect of sufficient evacuations, or to the too early employ-

ment of tonic, and stimulants.

Chronic hepatitis seldom continues, for any length of time, without inducing various alterations in the organization of the liver. The most common is an enlargement of the organ from congestion. In which cases large quantities of blood are collected in its vessels; this in some instances, escapes into the intestinal canal, and gives rise to the disease termed Melæna.

The liver is frequently found increased in size, without any material alteration in its structure; the enlargement arising from a deposit of interstitial matter in its parenchyma. A remarkable case of this kind is related by Johnson, in which the liver weighed forty pounds.

A condition of the organ very different in appearance from the preceding, is often met with, where it is indurated & much diminished in volume, many of its vessels being oblitera-

-ted. This is a common effect of chronic inflammation in glandular bodies, and to which the term *scirrhus* has been applied.

There are other affections of the liver, supposed to result from chronic inflammation, which are of a more formidable nature. These are tubercles, which occasionally occupy the greater portion of this organ, giving to its surface an irregular appearance.

Hydatids are also sometimes found attached to its peritoneal coat, or deeply seated in its substance. The nature of these bodies is not well understood; they are supposed by Baillie to be "a sort of imperfect animalcules." In some cases they become of an immense size, containing a considerable quantity of fluid. Thomas mentions an instance where sixteen pints of water were drawn off from an hydatid situated in the liver.

These are the different conditions, in which the liver is found, on dissection. But it is admitted

ted by the best authorities, that there are no signs
by which they can be distinguished from each
other, during the life of the patient. We may ascer-
tain that the organ is enlarged, but we can-
not determine whether this arises from inter-
stitial deposit, from hydatid, or from conges-
tion. And this is left to be regretted when we con-
sider, that all these affections, however dif-
ferent, must be connected with a degree of
inflammation, and that the means best cal-
culated to remove this, will give most relief.
Moreover, some of them are utterly incurable, so
that we could effect nothing more, by being a-
ware of their existence.

The means principally to be relied on in the
treatment of chronic hepatitis, are, local de-
pletion; counter-irritation by blister, & regu-
lar purging; and an alterative course of mer-
cury. - Bland diet is not generally demanded

This must be determined by the state of the pulse
& other symptoms. Leeches or leeches may however,
be freely applied as long as there is pain or
uneasiness in the part. These are to be followed
by a succession of blisters; or we may keep up
a permanent drain from the part by a seton
or issue. Purgatives are very important; they
are called for, by the torpid condition of the
liver & bowels, as well as by the vitiated state
of the secretions. Moderate & regular evacua-
tion, should be procured by the exhibition
of calomel at proper intervals, aiding its ac-
tion by some laxative. This must be con-
tinued until the above discharges assume
a healthy appearance. The Sanguiferum is high-
ly recommended as a deobstruent in these
cases, & may be a useful adjuvant. At
this period we may employ with benefit, the
bitter infusions, with the addition of an alkali

alkali and some aromatic. This treatment will generally prove successful in recent cases, and when the disease is functional. But if the structure of the liver has undergone any of the alterations, before enumerated, it will as generally fail, and our chief reliance is to be placed on mercury. It must be introduced into the system in the most gradual manner, so as to obtain its alterative effects. During its use the morbid secretion, should be carried off, by giving occasionally, some mild purgative. Where the mercury proves ineffectual, or is considered inadvisable by the debility of the patient, the nitro-muriatic acid will be found a valuable substitute. It is used principally in the form of a bath, either general or applied to the lower extremities. "The nitro-muriatic acid bath, (says Dr Scott) appears in a particular manner to affect the glands, and to alter their

It is a very common mistake to suppose that the
theology of the Bible is a mere collection of
facts and figures, and that it is a science
which can be taught by the same methods as
the natural sciences. But the Bible is not a
book of facts and figures, but a book of
revelation. It is a book which tells us
of the things which God has done for
his people, and of the things which he
has planned to do for them in the future.
It is a book which tells us of the love
of God, and of the love which he has
for his people. It is a book which tells
us of the redemption of the world, and
of the redemption of the individual soul.
It is a book which tells us of the
glory of God, and of the glory which he
has planned to give to his people. It is
a book which tells us of the things which
we cannot see, but which we can believe.
It is a book which tells us of the things
which are true, and which are eternal.
It is a book which tells us of the things
which are good, and which are beautiful.
It is a book which tells us of the things
which are holy, and which are pure.
It is a book which tells us of the things
which are just, and which are right.
It is a book which tells us of the things
which are true, and which are eternal.

secretions; and on this, power a great part of its value, in derangements of the liver, seems to depend. It sometime, very suddenly increases the secretion of bile; and this effect may be kept up for a length of time.

In addition to these active remedies, the diet of patient requires some attention. His food should be simple and plainly dressed; and he should be cautioned against exceeding the bounds of moderation, which he is apt to do, the appetite being often unimpaired. All acids, acerbent, excitables, pasty, soupy, oily meat, and high seasoned dishes, must be prohibited.

The warm bath, succeeded by friction, is a useful auxiliary in the cure of this disease. It relaxes the internal organs, and by keeping up a moderate action on the skin, promotes the biliary secretion. —

